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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,523

07/28/2003

Ray F. Campbell

BOE 0416 PA

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05/25/2004

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EXAMINER

KWOK, HELEN C

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/604,523	Applicant(s) CAMPBELL ET AL.	
	Examiner Helen C. Kwok	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                       |                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____                                                |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-20 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 10, the word – said – should be inserted after the word “and”. In line 15, the phrase “said first flexure plate” should be changed to – said first plate – to provide proper antecedent basis. In line 15, the phrase “said fixed plate” should be changed to – said flexure plate – to provide proper antecedent basis. In line 17, the phrase “said second fixed plate” should be changed to – said second plate – to provide proper antecedent basis.

In claim 7, line 4, the phrase “said linearized acceleration signal” lacks antecedent basis. It appears that this claim should be depended on claim 5.

In claim 9, line 3, the phrase “the flexure plate” should be changed to – a flexure plate --.

In claim 16, lines 7-8, the phrase “said housing structure” should be changed to – a housing structure --. In line 11, the word – at – should be inserted after the word “structure”. In lines 28-29, the phrase “said first scaled voltage signal” should be changed to – a first scaled voltage signal --. In lines 29-30, the phrase “said second scaled voltage signal” should be changed to – a second scaled voltage signal --.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7 and 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,454,266 (Chevroulet et al.).

Chevroulet et al. discloses a force measuring device comprising, as illustrated in Figures 1-6, a first fixed plate 3; a second fixed plate 4; a flexure plate 2 disposed between the first and second fixed plates; a first transimpedance amplifier 5 receives a first displacement capacitance signal to generate a first scaled voltage signal; a second transimpedance amplifier 6 receives a second capacitance signal to generate a second scaled voltage signal wherein an acceleration signal is generated from the first and second scaled voltage signals. (See, column 3, line 35 to column 4, line 35).

With regards to claims 2-7, Chevroulet et al. further discloses a differential amplifier; A/D converter; integrator; linearizing the integrated signal; actuator to activate a system component. (See, column 5, line 10 to column 7, line 66).

With regards to claims 9-15, the claims are commensurate in scope with claims 1-7 and are rejected for the same reasons as set forth above.

With regards to claim 16, the claim is commensurate in scope with claims 1-7 and is rejected for the same reasons as set forth above.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,454,266 (Chevroulet et al.).

With regards to claims 8 and 17, although Chevroulet et al. does not explicitly suggest the system component as a thruster, an attitude control device, missile steering nozzle or vane actuator, it would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of using other components without departing from the scope of the invention, namely to measure acceleration.

With regards to claim 18-20, Chevroulet et al. does not teach a second accelerometer and a third accelerometer. However, this is a mere design expedient to an artisan in the art to have duplicate the accelerometer and to have each of the accelerometers in communication with one another. (NOTE: St. Regis Paper Co. V. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977)).

***Conclusion***

Art Unit: 2856

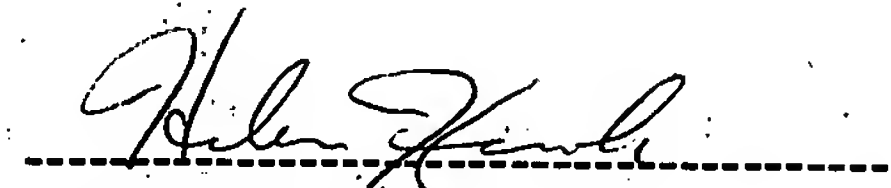
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to capacitive accelerometers.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Helen C. Kwok  
Art Unit 2856

hck  
May 20, 2004